

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK



UNITED STATES OF AMERICA,

v.

6:17-CR-06173 EAW

BIN WEN a/k/a Ben,

Defendant.

UNITED STATES OF AMERICA,

v.

6:17-CR-06174 EAW

PENG ZHANG a/k/a Jessica,

Defendant.

DECISION AND ORDER

I. INTRODUCTION

On February 2, 2018, Defendants Bin Wen (“Wen”) and Peng Zhang (“Zhang”) (collectively “Defendants”) waived indictment and entered guilty pleas. (Case No. 6:17-cr-06173, Dkt. 43; Case No. 6:17-cr-06174, Dkt. 41).¹ Wen pleaded guilty to a two-count Information charging (1) a violation of 18 U.S.C. § 1349 (conspiracy to commit wire fraud)

¹ Hereinafter, references to the docket in Case No. 17-cr-06173 are denoted as “Wen Dkt. ___” and references to the docket in Case No. 17-cr-06174 are denoted as “Zhang Dkt. ___.”

and (2) a violation of 18 U.S.C. § 1957(a) (engaging in monetary transactions in property derived from specified unlawful activity). (Wen Dkt. 43 at 1-2). Zhang pleaded guilty to a one-count Information charging a violation of 18 U.S.C. § 371 (conspiracy to defraud the United States). (Zhang Dkt. 41 at 1).

Presentence Investigation Reports (“PSRs”) as to Defendants dated May 4, 2018, conclude that the total offense level applying to Wen’s convictions is 26 (Wen Dkt. 47 (hereinafter “Wen PSR”) at ¶ 214) and that the total offense level applying to Zhang’s conviction is 25 (Zhang Dkt. 44 (hereinafter “Zhang PSR”) at ¶ 203). The PSRs’ calculation of the offense level as to each Defendant includes an 18-level enhancement pursuant to United States Sentencing Guideline (“U.S.S.G.”) § 2B1.1(b)(1)(J) based on a finding that the total loss amount was \$8,410,900; a two-level enhancement pursuant to U.S.S.G. § 2B1.1(b)(10)(C) based on a finding that the offense involved sophisticated means; and a two-level enhancement pursuant to U.S.S.G. § 3B1.3 based on a finding that Defendants abused a position of public or private trust, or used a special skill, in a manner that significantly facilitated the commission or concealment of the offense. (Wen PSR at ¶¶ 196-97, 199; Zhang PSR at ¶¶ 194-95, 197). Defendants object to the loss amount calculation, as well as to the sophisticated means and abuse of trust enhancements. (Wen Dkt. 53 at 14-28; Zhang Dkt. 49 at 14-28). Defendants also object to many other factual conclusions set forth in the PSRs. (Wen Dkt. 53; Zhang Dkt. 49).

On October 15, 2018, Revised PSRs were filed as to each Defendant. (Wen Dkt. 64; Zhang Dkt. 63). The Revised PSRs contain addendums addressing Defendants’ factual and legal objections and continue to conclude that: (1) the loss amount is \$8,410,900; (2) the

sophisticated means enhancement applies; and (3) the abuse of trust enhancement applies. (Wen Dkt. 64 at 68-70; Zhang Dkt. 63 at 61-63).²

For the reasons set forth below, the Court concludes that the Government has shown, by a preponderance of the evidence, that the amount of the loss in this case is greater than \$3,500,000, that Defendants have not shown that any credits apply against that loss, and that an 18-level enhancement under U.S.S.G. § 2B1.1(b)(1)(J) is warranted. The Court further finds that the Government has established by a preponderance of the evidence that the offense involved sophisticated means and that Defendants used special skills in a manner that significantly facilitated the commission or concealment of their offenses. As a result, the Court calculates total offense levels of 26 as to Wen and 25 as to Zhang. The Court resolves Defendants' additional factual objections as set forth in detail below, and reserves on the issue of the restitution owed by Defendants until the time of sentencing.

II. FACTUAL AND PROCEDURAL BACKGROUND

The factual underpinnings of Defendants' crimes are set forth in both Wen and Zhang's plea agreements. For ease of reference, the Court has cited solely to Wen's plea agreement in reciting the factual background.

Wen is Zhang's husband. (Wen Dkt. 43 at ¶ 4). On or about December 1, 2003, Zhang formed United Environment & Energy, LLC ("UEE"). (*Id.*). From about June 2010 and continuing until December 2015, Defendants, acting through UEE, participated in a scheme

² Because Defendants' objections were filed prior to the issuance of the Revised PSRs, all the associated filings cite to the relevant paragraphs in the original PSRs. For ease of reference, the Court has therefore also cited to the relevant paragraphs of the original PSRs, rather than the Revised PSRs.

to defraud agencies and departments of the United States, including the National Science Foundation (“NSF”), the Department of Energy (“DOE”), and the Department of Agriculture (“USDA”), by submitting false information in Small Business Innovation Research (“SBIR”) and Small Business Technology Transfer (“STTR”)³ applications. (*Id.*). UEE submitted approximately 13 applications to the NSF totaling over \$2.6 million, 10 applications to the DOE totaling over \$5 million, and 4 applications to the USDA totaling approximately \$650,000. (*Id.*). In total, Defendants, through their companies, received approximately \$8.4 million in awards from the NSF, the DOE, and the USDA. (*Id.*).

In the application proposals and financial reports related to the various awards Defendants received, they submitted false information regarding the work done and payment received by various individuals. (*Id.*). Defendants used a substantial portion of the proceeds from their fraud for their own personal benefit. (*Id.*).

Defendants were charged by criminal complaints filed February 22, 2016, with conspiracy to make false claims and making false claims in violation of 18 U.S.C. §§ 286 and 287, conspiracy to commit wire fraud and wire fraud in violation of 18 U.S.C. §§ 1343 and 1349, a scheme to transfer funds obtained through specified unlawful activities in violation of 18 U.S.C. § 1957, and conspiracy to commit money laundering in violation of 18 U.S.C. § 1956(h). (Wen Dkt. 1; Zhang Dkt. 1).

³ SBIR and STTR are programs operated by the Small Business Administration to “encourage[] domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization” by granting monetary awards. Small Business Administration, *About*, SBIR·STTR, <https://www.sbir.gov/about/> (last visited December 19, 2018).

On February 2, 2018, Wen waived indictment and pleaded guilty to a two-count Information charging: (1) a violation of 18 U.S.C. § 1349 (conspiracy to commit wire fraud), for which the maximum possible sentence is a 20-year term of imprisonment, a \$250,000 fine, a \$100 mandatory special assessment, and a three-year term of supervised release; and (2) a violation of 18 U.S.C. § 1957(a) (engaging in monetary transactions in property derived from specified unlawful activity), for which the maximum possible sentence is a 10-year term of imprisonment, a \$250,000 fine, a \$100 mandatory special assessment, and three-year term of supervised release. (Wen Dkt. 43). That same day, Zhang waived indictment and pleaded guilty to a one-count Information charging a violation of 18 U.S.C. § 371 (conspiracy to defraud the United States), for which the maximum possible sentence is a five-year term of imprisonment, a \$250,000 fine, a \$100 mandatory special assessment, and a three-year term of supervised release. (Zhang Dkt. 41).

The Court accepted Defendants' pleas. (Wen Dkt. 44; Zhang Dkt. 42). On May 4, 2018, the United States Probation Office filed Presentence Investigation Reports ("PSRs") as to each Defendant. (Wen PSR; Zhang PSR).

Defendants filed joint objections to the PSRs on July 30, 2018. (Wen Dkt. 53; Zhang Dkt. 49).⁴ The Government thereafter filed its response to Defendants' objections on September 14, 2018 (Wen Dkt. 61; Zhang Dkt. 60),⁵ and Defendants filed their replies on

⁴ Defendants have submitted joint objections that are substantively identical. (See Wen Dkt. 53; Zhang Dkt. 49). Throughout the remainder of this Decision and Order, for reasons of efficiency, the Court refers to these documents interchangeably.

⁵ The Government's filings in each case are identical and so, again, the Court refers to the documents interchangeably throughout this Decision and Order.

September 28, 2018 (Wen Dkt. 62; Zhang Dkt. 61). The Revised PSRs were filed on October 15, 2018. (Wen Dkt. 64; Zhang Dkt. 63).

Oral argument before the undersigned was held on October 17, 2018. (Wen Dkt. 65; Zhang Dkt. 65). The Court reserved decision and scheduled sentencing for February 6, 2019. (Wen Dkt. 65; Zhang Dkt. 65). Thereafter, on October 31, 2018, Defendants submitted a letter containing supplemental authority regarding their arguments with respect to the loss calculation. (Wen Dkt. 67; Zhang Dkt. 67). The Government filed a response to this letter on November 13, 2018 (Wen Dkt. 68; Zhang Dkt. 68), Defendants filed a reply on November 20, 2018 (Wen Dkt. 69; Zhang Dkt. 69), and the Government filed a sur-reply on November 29, 2018 (Wen Dkt. 70; Zhang Dkt. 70). On December 14, 2018, the Government filed a letter containing supplemental authority as to the same issue (Wen Dkt. 71; Zhang Dkt. 71), to which Defendants filed a reply on December 19, 2018 (Wen Dkt. 72; Zhang Dkt. 72).

III. DISCUSSION

A. Standard of Review

Pursuant to Federal Rule of Criminal Procedure 32, the Court must, prior to sentencing, “for any disputed portion of the presentence report or other controverted matter . . . rule on the dispute or determine that a ruling is unnecessary either because the matter will not affect sentencing, or because the court will not consider the matter in sentencing.” Fed. R. Crim. P. 32(i)(3)(B). However, the Court is not required to “perform a line-by-line review of the PSR,” so long as it “resolve[s] the substantive challenges” thereto. *United States v. Reiss*, 186 F.3d 149, 156-57 (2d Cir. 1999).

“At sentencing, disputed factual allegations must be proven by the government by a

preponderance of the evidence. . . .” *United States v. Rizzo*, 349 F.3d 94, 98 (2d Cir. 2003). However, sentencing proceedings are not “second trials,” *United States v. Fatico*, 603 F.2d 1053, 1057 (2d Cir. 1979), and the sentencing court may use hearsay statements in determining the sentence, *United States v. Lee*, 818 F.2d 1052, 1055 (2d Cir. 1987).

With respect to the amount of loss and corresponding appropriate offense level, the Government bears the burden of proving by a preponderance of the evidence: “(1) defendant intended to inflict the loss; and (2) the amount of the . . . loss.” *United States v. Nachamie*, 121 F. Supp. 2d 285, 291 (S.D.N.Y. 2000), *aff’d*, 5 F. App’x 95 (2d Cir. 2001). The Government bears the same burden with respect to the appropriate amount of restitution. *See United States v. Rutigliano*, 887 F.3d 98, 109 (2d Cir. 2018) (“[A]t sentencing, the government bears the preponderance burden of proving actual loss supporting a restitution order.”).

B. Factual Objections

Defendants have submitted numerous objections to the factual conclusions set forth in the PSRs. As noted above, the Court is not required to issue a ruling as to factual objections on matters that either “will not affect sentencing” or that “the court will not consider . . . in sentencing.” Fed. R. Crim. P. 32(i)(3)(B). Accordingly, the Court has limited its discussion of Defendants’ factual objections to those it considers potentially material to the issue of sentencing. As to any factual objections not specifically ruled on by the Court herein, the Court states that such matters will not be considered by the Court in determining the appropriate sentence in the instant cases.

Defendants' factual objections can largely be placed into two categories. First, Defendants object to the PSRs' conclusions regarding Dr. Colleen Costello, Dr. James Burlitch, and Scott Cicora. Dr. Costello is a chemical engineer with a Ph.D. from Northwestern University who has worked for Honeywell UOP since 2008. (Dkt. 61-2 at 2-4). Dr. Burlitch is an Emeritus Professor in the Department of Chemistry and Chemical Biology at Cornell University. (Wen PSR at ¶ 189). Mr. Cicora is an experienced electrical technician who worked at Hewlett-Packard for 26 years before becoming a consultant for renewable energy start-up companies. (Wen Dkt. 61-1 at 3-5). These individuals were associated with UEE at various points in time, and their names and biographical information were used in UEE's SBIR and STTR proposals. (*See, e.g.*, Wen Dkt. 61-3 at 20).

Second, Defendants object to the PSRs' conclusions regarding their use of other business entities they were affiliated with as "investors" into UEE. The Court considers each of these topics below, as well as various other factual objections raised by Defendants that the Court considers potentially material to sentencing.

1. Relationship of UEE with Dr. Costello, Dr. Burlitch, and Mr. Cicora

The PSRs discuss in detail UEE's relationship with Dr. Costello, Dr. Burlitch, and Mr. Cicora. As discussed further below, many of the false representations identified by the Government in UEE's SBIR and STTR proposals relate to these individuals and the work they were (or were not) performing for UEE.

With respect to Dr. Costello, the PSRs recite that she was budgeted to receive in excess of \$100,000 in salary from UEE for work on federally-funded projects between 2010 and the present, but that New York Department of Labor records indicate UEE reported paying Dr.

Costello only \$13,200 during that timeframe. (Wen PSR at ¶ 55; Zhang PSR at ¶ 52). Moreover, the PSR notes that Dr. Costello has stated that she was unaware she was listed in UEE's proposals, did not know that UEE had created an email address in her name, did not publish items UEE listed in her biography, and never gave anyone permission to use her biography in a proposal. (Wen PSR at ¶ 55; Zhang PSR at ¶ 52). Dr. Costello's name appeared in 20 awarded proposals, but never appeared in the draft proposals and reports that UEE provided to her to edit. (Wen PSR at ¶ 55; Zhang PSR at ¶ 52).

With respect to Dr. Burlitch, the PSRs state that he was budgeted to receive in excess of \$163,000 in salary from UEE for work on federally-funded projects between 2010 and the present. (Wen PSR at ¶ 56; Zhang PSR at ¶ 53). The PSRs further state New York Department of Labor records indicate that Dr. Burlitch was paid only \$11,000 in salary during this time frame and that Dr. Burlitch was unaware that his name was used in UEE's proposals. (Wen PSR at ¶ 56; Zhang PSR at ¶ 53).

Turning to Mr. Cicora, the PSRs indicate that he was budgeted to receive in excess of \$71,000 in salary from UEE for work on federally-funded projects between 2010 through the present, but that he in fact received no salary from UEE during that time. (Wen PSR at ¶ 57; Zhang PSR at ¶ 54).

In their objections, Defendants state that: (1) Mr. Cicora worked for UEE from November 2007 to approximately April 2013, as a business advisor; (2) Dr. Burlitch was a Senior Research Associate/Fellow at UEE from 2009 to 2015, first as an employee from 2009 to 2012, and then as an independent contractor from 2013 to 2015; and (3) Dr. Costello was an employee of UEE from 2004 to 2012, and an independent contractor from 2013 to 2015,

and was paid on a regular basis throughout that time. (Zhang Dkt. 49 at ¶ 3). Defendants further contend that Dr. Costello was paid \$28,800 by UEE between 2010 to 2015, and \$52,660 in total during her time at UEE, and that Dr. Burlitch was paid \$11,750 from 2010 to 2012, and \$9,000 from 2013 to 2015, for a total of \$20,750. (*Id.* at ¶¶ 4-5).

Having reviewed the various exhibits submitted by the parties, as well as their arguments, the Court finds that the PSRs accurately reflect the facts that (1) in their SBIR/STTR proposals and associated reports and correspondence, Defendants materially misrepresented the roles that Dr. Costello, Dr. Burlitch, and Mr. Cicora played at UEE and (2) in their SBIR/STTR proposals and associated reports and correspondence, Defendants misrepresented the amounts to be paid to Dr. Costello, Dr. Burlitch, and Mr. Cicora.

Dr. Costello, Dr. Burlitch, and Mr. Cicora have all confirmed that they did not do the work that UEE reported they were doing in its SBIR/STTR proposals. At an interview with agents of the NSF on March 4, 2016, Dr. Costello reported that she had assisted UEE in reviewing grant reports and press releases, but that she did not do research work for them. (Wen Dkt. 61-2 at 5). Dr. Costello stated that she had never done any research or engineering for UEE and that she had never even been to its facilities. (*Id.* at 6). Dr. Costello was unaware that she had been budgeted in any UEE grant proposals. (*Id.* at 13). As a more specific example, Dr. Costello indicated that with respect to NSF proposal number 1127426, Defendants' representation that she would perform engineering work was made without her knowledge and was not accurate. (*Id.* at 15-16). Dr. Costello also indicated that she was not, as Defendants had represented, a "Project Engineer of NYSERDA [the New York State Energy Research and Development Authority] and USDA Biodiesel Projects" and that she

did not know what “NYSERDA” meant. (*Id.* at 17-18). Dr. Costello further confirmed that her biographical information, as presented by Defendants, was incorrect, and falsely reported her publications. (*Id.* at 20-21). Dr. Costello also confirmed that the email address, phone number, and fax number Defendants had claimed were hers were false. (*Id.* at 30-31).

An interview with Mr. Cicora on March 2, 2016, yielded similar information. Mr. Cicora reported that he had been to UEE’s offices only once, for less than an hour. (Wen Dkt. 61-1 at 6). He stated that he “certainly was not an employee” of UEE and that he provided them consulting. (*Id.* at 13). Turning to specifics, Mr. Cicora reviewed a proposal that UEE had submitted to the DOE in 2008. (*Id.* at 14). He confirmed that Defendants had provided a false email address, phone number, and fax number for him therein. (*Id.* at 16). Defendants also omitted Mr. Cicora’s post-2005 employment history, and falsely claimed he was paid \$100 per hour by UEE. (*Id.* at 18, 21). Regarding NSF proposal 956737, submitted by UEE, Mr. Cicora confirmed Defendants had falsely reported he had worked on a number of projects with which he had no familiarity, and had claimed he was going to perform work he was incapable of performing. (*Id.* at 24, 26-27).

With respect to Dr. Burlitch, he has submitted a victim impact statement in which he confirmed that he “was listed as an active participant in several grant proposals and reports about which [he] knew nothing at all, and had contributed nothing.” (Wen PSR at ¶ 189). Dr. Burlitch noted in particular that he had been listed as an author on two scientific presentations when he did not even know of the existence of the underlying projects. (*Id.*).

Turning to the specific issue of payments made to Dr. Costello, Dr. Burlitch, and Mr. Cicora, as the Government notes in its response to Defendants’ objections, even fully crediting

the amounts Defendants claim UEE paid these individuals, there is still a substantial difference between the amounts Defendants budgeted for these individuals in their proposals and the amounts these individuals were ultimately paid. The Court is not persuaded that Defendants' claim that "[t]he difference in budgeted amount versus actual payments for [Dr.] Costello was reported to the agencies in . . . interim and final reports" (Zhang Dkt. 49 at ¶ 4), even if true, is relevant. First, Defendants have not made a similar claim as to Dr. Burlitch and Mr. Cicora. Second, the Government has established by a preponderance of the evidence that Defendants never had any intention of paying Dr. Costello, Dr. Burlitch, and Mr. Cicora the amounts set forth in the proposals, inasmuch as those individuals never agreed to perform the work for which they were supposedly to be paid. Even if Defendants subsequently reported the true amounts paid to the involved agencies, that does not change the fact that they knew when the proposals were submitted that Dr. Costello, Dr. Burlitch, and Mr. Cicora would not be performing the tasks or receiving the payments set forth therein. In other words, Defendants plainly obtained moneys from these agencies based on false representations regarding work to be performed by Dr. Costello, Dr. Burlitch, and Mr. Cicora.

The Court is also not persuaded by Defendants' attempts to conflate employees and independent contractors. *See O'Hare Truck Serv., Inc. v. City of Northlake*, 518 U.S. 712, 721 (1996) ("[T]he distinction between employees and independent contractors has deep roots in our legal tradition. . . ."). As the Government has shown in its submissions, one of the factors agencies consider in assessing applications under the SBIR/STTR programs is whether the applicant's personnel have the capacity to perform the work set forth in the proposal. Accordingly, the difference between a full-time employee, as Defendants' represented Dr.

Costello, Dr. Burlitch, and Mr. Cicora to be, and an independent contractor with other employment and responsibilities, was material in the context of Defendants' offenses.

Defendants and the Government also dispute Dr. Costello's and Dr. Burlitch's relationship with KEW Technologies, Inc. ("KEW"), which was formed in or around April 2015, by Wen. (*See* Zhang PSR at ¶ 60). The PSRs indicate that KEW filed four proposals for SBIR funding in 2015, each of which listed Dr. Costello as a Project Quality Manager and Dr. Burlitch as a Senior Research Fellow. (Wen PSR at ¶ 65; Zhang PSR at ¶ 62). The PSRs state that Dr. Costello and Dr. Burlitch were not in fact employees of KEW as set forth in these proposals. (Wen PSR at ¶ 66; Zhang PSR at ¶ 63). However, Defendants maintain that Dr. Costello and Dr. Burlitch did work for KEW. (Zhang Dkt. 49 at ¶ 8).

The Court finds that the PSRs are correct in stating that Dr. Costello and Dr. Burlitch were not employees of KEW as claimed in the SBIR proposals, regardless of whether they may have performed some work for KEW. Dr. Costello expressly stated that she never agreed to be a "Project Quality Manager" for KEW. (Wen Dkt. 61-2 at 35). Similarly, the Government has shown by a preponderance of the evidence that Dr. Burlitch did not perform or agree to perform the tasks attributed to him in KEW's proposals. (*See, e.g.*, Wen. Dkt. 61-3 at 19-20).

Defendants also take issue with the PSRs characterization of Dr. Costello, Dr. Burlitch, and Mr. Cicora as "victims" of their crimes, and particularly the PSRs' statement that Defendants' crimes involved "stealing the identities and biographical information" of these individuals. (*See* Wen PSR at ¶ 187; Zhang PSR at ¶ 184). Defendants note that their actions do not satisfy the legal definition for criminal identify theft under the Aggravated Identity

Theft statute, 18 U.S.C. § 1028A, and contend they did not cause any harm to Dr. Costello, Dr. Burlitch, or Mr. Cicora. (Zhang Dkt. 49 at ¶¶ 25-26).

The Court finds no merit in these objections by Defendants. First, while Defendants' actions may not satisfy the statutory elements of Aggravated Identity Theft, Defendants certainly misappropriated and misused Dr. Costello's, Dr. Burlitch's, and Mr. Cicora's identities, backgrounds, and reputations for their own criminal benefit. The PSRs do not suggest that Defendants committed criminal Aggravated Identity Theft but instead refer to stolen identity in a colloquial sense that is appropriate here.

Moreover, Dr. Costello, Dr. Burlitch, and Mr. Cicora have been victimized by Defendants. The Crime Victim Rights Act defines a "crime victim" as someone who is "directly and proximately harmed as a result of the commission of a Federal offense." *In re Rendon Galvis*, 564 F.3d 170, 175 (2d Cir. 2009) (quoting 18 U.S.C. § 3771(e)). Dr. Costello, Dr. Burlitch, and Mr. Cicora easily satisfy this definition. As Dr. Burlitch explained in his victim impact statement, by including him as an author on publications with which he played no role, Defendants have affected Dr. Burlitch's scientific reputation and placed him in the position of potentially being called upon to defend findings Defendants wrongly attributed to him. (*See* Wen PSR at ¶ 189). A similar analysis applies to Dr. Costello and Mr. Cicora, both of whom were falsely represented by Defendants without knowledge or consent. Defendants' conduct directly and harmfully impacted Dr. Costello, Dr. Burlitch, and Mr. Cicora by using their names and professional reputations in ways not authorized by them and that ultimately were fraudulent, thereby tarnishing those names and reputations. Dr. Costello's, Dr. Burlitch's, and Mr. Cicora's careers rely on their scientific and engineering expertise and, as

with any professional, their reputations (earned through many years of education and experience) are likely the greatest assets they possess. The fact that the harms suffered by these victims were not quantified in monetary terms does not render them any less real.

For the foregoing reasons, the Court finds that the Government has shown by a preponderance of the evidence that Defendants materially and repeatedly misrepresented the scope of Dr. Costello's, Dr. Burlitch's, and Mr. Cicora's respective relationships with UEE and/or KEW. The Court further finds that the record shows Defendants falsely misrepresented the work they intended for Dr. Costello, Dr. Burlitch, and Mr. Cicora to perform and the amounts they intended to pay for that work. In addition, the Government has proven by a preponderance of the evidence that Dr. Costello, Dr. Burlitch, and Mr. Cicora were victims of Defendants' offenses and that Defendants misused and misappropriated these Defendants' identities.

2. Defendants' Identification of Sham Companies as "Investors" in UEE

Defendants also object to a number of the PSRs' conclusions regarding their use of companies they were affiliated with as purported "investors" into UEE in connection with their SBIR/STTR proposals.

The PSRs identify a number of "sham investment companies" created by Defendants in connection with their crimes. (Wen PSR at ¶¶ 67-89; Zhang PSR at ¶¶ 64-86). As the PSRs note, Phase IB of the SBIR and STTR programs requires an awardee to "obtain outside equity funding ranging, at all relevant times, from a minimum of \$40,000 to a maximum of \$100,000." (Wen PSR at ¶ 44(b); Zhang PSR at ¶ 41(b)).

The following facts from the PSRs are undisputed by Defendants: Wen formed Advanced Technologies and Materials, LLC (“ATM”) in December 2007, and reported as its address Defendants’ residential address and UEE’s business address. (Wen PSR at ¶ 69; Zhang PSR at ¶ 66). Defendants identified ATM as an investor in UEE in multiple proposals, some of which included letters of support from George Wen, Jessica Song, and Kelly Niu. (Wen PSR at ¶ 71; Zhang PSR at ¶ 68). George Wen is a family member of Defendant Wen, while Jessica Song and Kelly Niu are fictitious and have never had any affiliation with ATM. (Wen PSR at ¶ 71; Zhang PSR at ¶ 68). Defendants represented to the DOE that ATM had made a \$100,000 investment into UEE; however, this “investment” was preceded by an even larger transfer of funds from UEE to ATM, which Defendants created sham invoices to support. (Wen PSR at ¶ 73; Zhang PSR at ¶ 70).

The PSRs conclude, based on the foregoing, that ATM was not an “eligible outside investor” as required by the SBIR and STTR programs, noting that Wen had attended conferences where it was made clear that “in-kind, loans, and self-funding” were not acceptable forms of investment to satisfy the requirements of Phase IB. (Wen PSR at ¶ 74; Zhang PSR at ¶ 71). Defendants counter that all that is required for Phase IB is that funding come from “a third party investor” and note that ATM was a separate company from UEE. (Zhang Dkt. 49 at ¶ 9).

The Court finds Defendants’ argument unavailing. While ATM may have been a separate company from UEE on paper, the Government has shown by a preponderance of the evidence that it was nothing more than a sham company and not a legitimate third-party investor. It is undisputed that ATM had no independent physical location, instead purportedly

sharing either Defendants' residential address or UEE's address. Similarly, it is undisputed that Defendants created fictitious individuals they claimed were associated with ATM, fabricating letters on their behalf in support of UEE's proposals. Defendants also have not disputed that they created sham invoices to support transferring funds from UEE to ATM, further confirming that ATM was not a legitimate business and could not qualify as a third-party investor. Indeed, Defendants have filed no objection to the PSRs' conclusion that UEE was the main source of ATM's funds, and that ATM never had more than \$171,000 in its bank account despite submitting a letter of support for UEE's proposals promising between \$200,000 and \$500,000 dollars. (Wen PSR at ¶ 75; Zhang PSR at ¶ 72).

Defendant Wen's brother Haifang Wen ("H. Wen") was also involved in Defendants' offenses. On or around May 2, 2007, H. Wen formed National Technology Development, LLC ("NTD"). (Wen PSR at ¶ 76; Zhang PSR at ¶ 73). As with ATM, both Defendants' residential address and UEE's address were used as addresses for NTD. (Wen PSR at ¶ 77; Zhang PSR at ¶ 74). NTD was identified as an outside investor in UEE in proposals to the NSF, the DOE, and the USDA. (Wen PSR at ¶ 79; Zhang PSR at ¶ 76). In connection with its proposals, UEE submitted three letters of support from NTD, signed by Thomas Lou. (Wen PSR at ¶ 79; Zhang PSR at ¶ 76). Thomas Lou does not exist and has never been affiliated with NTD. (Wen PSR at ¶ 79; Zhang PSR at ¶ 76).⁶ NTD never made the

⁶ At oral argument, defense counsel suggested that Mr. Lou was Wen's brother-in-law who lives in China. However, Defendants did not object to the statement in the PSRs that "[b]ased upon a review of public records and records obtained from law enforcement databases, there is no indication that Thomas Lou exists. . . ." (See Wen PSR at ¶ 79; Zhang PSR at ¶ 76). Moreover, even assuming Thomas Lou is a real person, there is no suggestion that he authored the letters in question or that he was affiliated with NTD.

“investments” into UEE represented to the Government. (Wen PSR at ¶ 80; Zhang PSR at ¶ 77). These facts are undisputed by Defendants.

Wen also formed a company called Renewable Materials, LLC (“RM”) on or about August 20, 2010. (Wen PSR at ¶ 83; Zhang PSR at ¶ 80). Wen was the sole owner of RM. (Wen PSR at ¶ 85; Zhang PSR at ¶ 82). RM was represented as an investor in UEE in a proposal to the DOE, including by a letter of support from “Pam Zhang, Managing Member.” (Wen PSR at ¶ 88; Zhang PSR at ¶ 85). Pam Zhang does not exist and was not ever affiliated with RM. (Wen PSR at ¶ 88; Zhang PSR at ¶ 85). RM never transferred funds to UEE. (Wen PSR at ¶ 89; Zhang PSR at ¶ 86). Again, Defendants have filed no objections to these facts as recited in the PSRs.

For the foregoing reasons, the Court finds that the Government has shown by a preponderance of the evidence that Defendants’ representations regarding ATM, NTD, and RM’s purported investments into UEE were false. The Court further finds that the Government has shown by a preponderance of the evidence that ATM, NTD, and RM were not legitimate third-party investors.

3. False Statements in Proposals, Reports, and Correspondence

The PSRs identify 27 “UEE proposals and/or related reports and correspondence” that “contained false and/or fabricated documents.” (Wen PSR at ¶ 52; Zhang PSR at ¶ 49). In particular, the PSRs conclude that these proposals and related reports and correspondence contained false information regarding: (1) purported investments to be made by ATM, NTD, and/or RM; and (2) the employment status of Dr. Costello, Dr. Burlitch, and Mr. Cicora, and the work to be completed by those individuals. (See Wen PSR at ¶¶ 90-125; Zhang PSR at

¶ 87-122). Defendants argue that not all of these proposals and related reports and correspondence contained false information, based on their contentions regarding Dr. Costello, Dr. Burlitch, and Mr. Cicora, as well as regarding ATM's status as a third-party investor. (*See* Zhang Dkt. 49 at ¶¶ 11-13).

At oral argument, the Government clarified that NSF Proposal Number 1240215 did not itself contain false information but was related to a prior application that did contain false information. As such, the Government conceded that only 26 out of the 27 identified proposals (or related reports and correspondence) directly contained false information. With respect to those 26 proposals, having found Defendants' arguments regarding Dr. Costello, Dr. Burlitch, Mr. Cicora, and ATM unavailing for the reasons set forth above, the Court finds that the Government has shown by a preponderance of the evidence that the identified proposals and related reports and correspondence contained false information or documents.

4. Transfers of UEE Funds to Personal Accounts

The PSRs state that between approximately July 2007 and December 2015, a total of \$11,987,312.55 was deposited into UEE, ATM, and RM's bank accounts, of which approximately \$6.7 million was transferred to Defendants' personal bank and investment accounts. (Wen PSR at ¶ 174; Zhang PSR at ¶ 171). Defendants object that the total deposit figure includes investments and license fees from non-SBIR sources, and that the \$6.7 million included Defendants' salaries, labor charges from the projects, the 7% fees/profits allowed by the SBIR/STTR programs, technology licenses or evaluation fees, and retirement account contributions. (*See* Zhang Dkt. 49 at ¶ 16). None of the information presented by Defendants

is inconsistent with the statements set forth in the PSRs. At most, it provides additional context. Accordingly, there is no dispute to be resolved with respect to this issue.

5. Time Reporting Issues

The PSRs conclude that Defendants failed to comply with time- and recordkeeping requirements under its SBIR and STTR grants. (Wen PSR at ¶ 176; Zhang PSR at ¶ 173). In particular, the PSRs state that Defendants did not accurately record the time employees spent on projects, but that instead, Zhang directed employees to inaccurately complete their timesheets regardless of their work. (Wen PSR at ¶ 176; Zhang PSR at ¶ 173). Defendants argue that their timekeeping methods were appropriate, because UEE employees would work on multiple projects simultaneously, and they attempted to accurately reflect the work done by using a percentage method for recording employee time. (Zhang Dkt. 49 at ¶ 18).

The Court finds the Government has shown by a preponderance of the evidence that Defendants did not comply with the relevant timekeeping requirements. Multiple UEE employees confirmed that they did not attempt to meaningfully allocate their time. For example, UEE employee Randall Withey told federal agents that he did not track the amount of his time spent on various projects, and instead he would just work and then charge his time to whatever job Zhang instructed. (Zhang Dkt. 60-7 at 11). UEE employee Michelle Dann similarly reported that when UEE worked on multiple projects, she did not track her time, but that Zhang would tell her to charge the first two weeks of the month to one project and the second two weeks of the month to a second project. (Zhang Dkt. 60-8 at 9-10). UEE employee Marianne Meyers also confirmed that Zhang told her how much time to record for each project and that it did not correspond to what she was actually doing. (Zhang Dkt. 60-9

at 15). This is not a “percentage method” as claimed by Defendants, because the employees did not meaningfully track the percentage of their time spent on various projects. Rather, Zhang directed the employees’ false reporting of their time, essentially rendering any timekeeping reports meaningless.

6. Duplicate Funding Issues

The PSRs conclude that for certain projects, UEE received duplicate funding from both the federal government and NYSERDA, because Defendants did not disclose the existence of NYSERDA funding in its federal proposals, as required. (Wen PSR at ¶ 179; Zhang PSR at ¶ 176). Defendants contest this finding, arguing that “[t]o the extent UEE received funding from the federal government and a state agency or third party for a similar project, the additional funds were used to conduct additional, complementary research to the work performed on the federal SBIR/STTR projects.” (Zhang Dkt. 49 at ¶¶ 19-20).

The Court finds the Government has failed to show by a preponderance of the evidence that Defendants failed to disclose NYSERDA projects when submitting federal proposals with overlapping objectives. At oral argument, the Government conceded that it lacked information regarding the timing associated with the various NYSERDA grants. In the absence of more specific information regarding the NYSERDA projects at issue, the Court is unable to conclude that Defendants were obligated to disclose them in their SBIR/STTR proposals. The Court therefore sustains Defendants’ objections as to paragraphs 179 through 182 of Wen’s Revised PSR (Wen Dkt. 64) and paragraphs 176 through 179 of Zhang’s Revised PSR (Zhang Dkt. 63).

C. Legal Arguments

In addition to the factual disputes discussed above, Defendants have made legal arguments related to the PSRs' calculation of their offense levels and the amount of restitution owed, as noted above. The Court considers these arguments below.

1. Calculation of Loss Amount

As set forth above, the PSRs' calculation of the offense level as to each Defendant includes an 18-level enhancement pursuant to U.S.S.G. § 2B1.1(b)(1)(J) based on a finding that the total loss amount was \$8,410,900. (Wen PSR at ¶ 196; Zhang PSR at ¶ 194). This amount represents the full value of the SBIR/STTR grant awards Defendants obtained fraudulently. Defendants dispute the applicability of this enhancement, arguing that the loss amount in this case is zero, consistent with the so-called "Credits Against Loss Rule." (Zhang Dkt. 49 at ¶ 27).

A sentencing court is required to make a "reasonable estimate of the loss" associated with a defendant's crimes. *United States v. Lacey*, 699 F.3d 710, 719 (2d Cir. 2012) (quoting U.S.S.G. § 2B1.1 Application Note 3(C)); *see also United States v. Bryant*, 128 F.3d 74, 75 (2d Cir. 1997) ("[T]he Guidelines do not require that the sentencing court calculate the amount of loss with certainty or precision."). "Under the Guidelines, the 'General Rule' is that 'loss is the greater of actual loss or intended loss.'" *United States v. Nawaz*, 555 F. App'x 19, 25 (2d Cir. 2014) (quoting U.S.S.G. § 2B1.1 Application Note 3(A)). "Actual loss" is "the reasonably foreseeable pecuniary harm that resulted from the offense," while "intended loss" is "the pecuniary harm that the defendant purposely sought to inflict," and "includes intended

pecuniary harm that would have been impossible or unlikely to occur.” U.S.S.G. § 2B1.1 Application Note 3(A)(i) and (ii).

The loss amount must be reduced by certain “credits against loss,” including “the fair market value of . . . the services rendered, by the defendant or other persons acting jointly with the defendant, to the victim before the offense was detected.” U.S.S.G. § 2B1.1 Application Note 3(E)(i). Related to the Credits Against Loss Rule is the Government Benefits Rule set forth in U.S.S.G. § 2B1.1 Application Note 3(F)(ii). The Government Benefits Rule provides that “[i]n a case involving government benefits (e.g., grants, loans, entitlement program payments), loss shall be considered to be not less than the value of the benefits obtained by unintended recipients or diverted to unintended uses, as the case may be.” *Id.*

In this case, Defendants contend that application of the Credits Against Loss Rule necessitates a finding that the loss was zero. Defendants argue that they “fully performed under UEE’s contracts with NSF, DOE, and USDA, to the agencies’ complete satisfaction.” (Zhang Dkt. 49 at ¶ 27.B). The Government counters that: (1) the Government Benefits Rule applies in this case and there should be no credit against loss; and (2) in any event, the NSF, the DOE, and the USDA received no benefit from Defendants’ work and therefore any offset would be zero. (Wen Dkt. 53 at ¶ 27).

a. Applicability of the Government Benefits Rule

As a threshold matter, the Court concludes that it is unnecessary to resolve whether the Government Benefits Rule applies in this case, because even if it does, the Credits Against Loss Rule still applies. In this regard, the Court finds instructive the Eleventh Circuit’s

decision in *United States v. Near*, 708 F. App'x 590 (11th Cir. 2017). In *Near*, as in the instant matter, the defendants received grants from governmental agencies, including the NSF, through the SBIR program. *Id.* at 593. The *Near* defendants did not comply with the proposed budgets they had submitted when seeking the grants, including by failing to make payments to two individuals identified as working on the project. *Id.* at 598. In calculating the loss to the Government, the district court determined that there was no loss, because the governmental agencies “got what they bargained for.” *Id.* at 602.

On appeal, the Eleventh Circuit expressly considered whether the Government Benefits Rule applied to grants received through the SBIR program, as well as the related issue of whether when an “intended recipient” of such a grant diverts the funds for “unintended uses,” the Credits Against Loss Rule applies. *Id.* at 602-03. The Eleventh Circuit concluded that under the Government Benefits Rule, “the value of services provided by an intended recipient can be credited against losses caused by that recipient’s unintended use of funds,” explaining that “[m]oney is fungible” and that it therefore only makes sense, where an intended recipient of the SBIR program uses the funds they received in unintended ways, to take into account the value of the services provided to the Government. *Id.* (quoting *Sabri v. United States*, 541 U.S. 600, 606 (2004)).

The Court agrees with the reasoning in *Near*, as well as with its distinguishing of earlier cases such as *United States v. Maxwell*, 579 F.3d 1282 (11th Cir. 2009), wherein the Credits Against Loss Rule was not applied. *See also United States v. Blanchet*, 518 F. App'x 932, 955 (11th Cir. 2013) (not applying the Credits Against Loss Rule). The defendants in both *Maxwell* and *Blanchet* were unintended recipients of the programs they had defrauded—in

the case of *Maxwell*, a program for minority- or women-owned businesses, 579 F.3d at 1306, and in the case of *Blanchet*, a program for small businesses, 518 F. App'x at 956-57. *See also United States v. Leahy*, 464 F.3d 773, 793-94 (7th Cir. 2006) (loss amount was benefit received where defendant wrongly received funds intended for minority- and women-owned businesses); *United States v. Bros. Const. Co. of Ohio*, 219 F.3d 300, 317-18 (4th Cir. 2000) (loss amount was benefit received where defendant wrongly diverted funds intended for disadvantaged business enterprises).

The Court agrees with the *Near* court that there is a fundamental difference between cases where funds are received by unintended recipients and cases where funds are received by intended recipients in a fraudulent manner and used for unintended purposes. In the former case, the fraud fully deprives the Government of opportunities to provide funding to disadvantaged groups, whereas in the latter case, the Government is not so deprived. *See Near*, 708 F. App'x at 603-04 (noting that with respect to “funds received by an unintended recipient,” “[i]t makes sense that such losses could not be offset by the value of services provided because those services should never have been provided by that recipient in the first place”).

The Government also notes that the Small Business Jobs Act of 2010, Pub. L. No. 111-240, 124 Stat. 2504 (2010), provides, in relevant part, that:

[I]n every contract . . . which is set aside, reserved, or otherwise classified as intended for award to small business concerns, there shall be a presumption of loss to the United States based on the total amount expended on the contract . . . whenever it is established that a business concern other than a small business concern willfully sought and received the award by misrepresentation.

15 U.S.C. § 632(w)(1) (2012) (emphasis added). Relying on *United States v. Singh*, 195 F. Supp. 3d 25, 30 (D.D.C. 2016), the Government argues that this statutory provision supports its contention that the appropriate measure of loss in this case is the full amount of the awards made to UEE. (Wen Dkt. 53 at ¶ 27.I.a). The Court disagrees and finds that, to the contrary, this statutory provision confirms the *Near* court’s holding that there is a unique harm to the Government in cases where an unintended beneficiary (in the case of the statute, a business concern other than a small business concern) receives an award it was not qualified to receive.

However, this is not such a case. Although the Government refers to Defendants as “unintended recipients” of the SBIR/STTR programs (*id.* at 19), it appears undisputed that UEE was in fact a minority-owned small business. At a minimum, the Court finds that the Government has not proved by a preponderance of the evidence that UEE was not the type of business concern meant to benefit from the SBIR and STTR programs. Accordingly, this case is analogous to *Near*, where an intended recipient of funds used them for unintended purposes.⁷ The Court finds, for the reasons discussed above, that under these circumstances the Credit Against Loss Rule applies, regardless of the applicability of the Government Benefits Rule. See *United States v. Nagle*, 803 F.3d 167, 181-83 (3d Cir. 2015) (finding, in

⁷ In discussing intended and unintended recipients, this Court has focused on the threshold criteria for participation in the SBIR and STTR programs. The Court does not suggest that the Government would ever intentionally fund a business engaged in fraud, but instead use the terminology to reflect that UEE could have been eligible to submit legitimate SBIR and STTR proposals.

context of fraudulently obtained highway construction contracts, that the Credits Against Loss Rule applies even if the Government Benefits Rule applies).⁸

b. Application of the Credits Against Loss Rule

The Court next considers what, if any, amount should be credited to Defendants pursuant to the Credits Against Loss Rule. As noted above, under that Rule, the loss amount must be reduced by “the fair market value of . . . the services rendered, by the defendant or other persons acting jointly with the defendant, to the victim before the offense was detected.” U.S.S.G. § 2B1.1 Application Note 3(E)(i).

The Second Circuit has not ruled on who bears the burden of establishing “fair market value” in applying the Credits Against Loss Rule, though it has noted (in the context of restitution) that “[a]s a general matter, the burden of proof as to a given issue is normally placed on the party that has an affirmative goal and presumptive access to proof.” *United States v. Smathers*, 879 F.3d 453, 460-61 (2d Cir. 2018) (finding defendant bears burden of proving offset based on claimed payment to victim). In the particular context of sentencing enhancements, it is well-established that “[t]he Government bears the burden of establishing, by a preponderance of the evidence, the amount of the loss for purposes of the sentencing enhancement.” *United States v. Jimenez*, 513 F.3d 62, 86 (3d Cir. 2008). However, “[a]lthough the burden of persuasion remains with the Government, once the Government

⁸ On December 14, 2018, the Government filed a copy of *United States v. Aldissi*, __ F. App’x __, 2018 WL 6584488 (11th Cir. Dec. 13, 2018), arguing that it supports the application of the Government Benefits Rule in this case. (Wen Dkt. 71; Zhang Dkt. 71). As noted above, the Court’s holding does not depend on the applicability of the Government Benefits Rule, and so *Aldissi* does not change the Court’s analysis.

makes out a *prima facie* case of the loss amount, the burden of production shifts to the defendant to provide evidence that the Government’s evidence is incomplete or inaccurate.”

Id. Consistent with these principles, the Sixth Circuit has found that where a defendant claims a loss amount should be reduced by the “fair market value of the work . . . performed,” he bears “the burden of proving the specific value by which [the loss] amount should be reduced.” *United States v. Washington*, 715 F.3d 975, 984-85 (6th Cir. 2013).

The Seventh Circuit reached a similar conclusion in *United States v. Borrasi*, 639 F.3d 774 (7th Cir. 2011). The defendant in *Borrasi* was a medical doctor who was convicted of Medicare fraud for having accepted bribes in exchange for referring Medicare patients to a psychiatric hospital. *Id.* at 776-77. “In order to conceal these bribes, [the defendant and his conspirators] were placed on the [hospital’s] payroll, given false titles and faux job descriptions, and asked to submit false time sheets.” *Id.* at 777. The defendant did perform some duties for the psychiatric hospital, but the extent of those duties was contested. *Id.* At sentencing, the district court found that the loss amount was \$647,204, the total amount of the bribes accepted by the defendant, and rejected the defendant’s argument that “he should have received a significant credit against that amount based on the 24-hour on-call services his team rendered, their membership and participation in [the hospital’s] committees, and various administrative services they provided to [the hospital].” *Id.* at 783. The district court found that the defendant had “performed some valuable services” for the hospital, estimated the value of those services at \$150,000, and reduced the loss amount accordingly. *Id.*

On appeal, the defendant attacked the sufficiency of the district court’s loss calculation, contending that “the district court’s determination of how much to reduce the loss amount—

based on the fair market value of the services he rendered—was not sufficiently detailed to constitute a reasonable estimate based on the evidence.” *Id.* The Seventh Circuit rejected this argument, explaining that the defendant “bore the burden of providing substantiated evidence . . . to counter the government’s explicit proof of loss” and that he had not met that burden. *Id.* (alteration in original) (quotation omitted). The Seventh Circuit particularly noted that the defendant had not provided any evidence of the specific value of the services provided, and concluded that “if anything, the district court was overly generous in crediting [the defendant] with \$150,000.” *Id.* (quotation omitted).

Based on the foregoing case law, the Court finds that while the Government has the initial burden of establishing the loss amount (and always retains the burden of persuasion), Defendants bear the burden of production with respect to the fair market value of the services they claim to have provided the Government. *Cf. United States v. Foster*, No. 1:14-CR-324, 2016 WL 3958895, at *12 n.9 (M.D. Pa. July 22, 2016) (considering “whose burden it is to prove ‘credits against loss’” and noting that “it is logical that a defendant would have some evidentiary burden to prove the fair market value of his own services as an offset against the Government’s proposed loss amount”). The Court further finds, for the reasons set forth below, that Defendants have not produced any evidence from which the Court could reasonably ascertain the value of those claimed services.

The Government has made a *prima facie* showing in this case that it awarded Defendants \$8,410,900 based on fraudulent representations. The Court finds that this is a reasonable estimate of the loss to the Government, inasmuch as Defendants did not perform the work they said they would in the manner they said they would perform it, and thereby

deprived the Government of the benefits it expected. The Court notes in particular that while Defendants claim that they performed all of the research set forth in their SBIR and STTR proposals, there is no dispute that much of UEE's research was not performed by the individuals Defendants falsely represented would be performing it. Scientific researchers are not fungible, and research performed and services rendered by experienced individuals such as Dr. Burlitch, Dr. Costello, and Mr. Cicora is not equally as valuable or as likely to yield promising technology as research performed by individuals with less substantial educational and work backgrounds. Were it otherwise, there would have been no reason for Defendants to misappropriate Dr. Burlitch's, Dr. Costello's, and Mr. Cicora's experience and reputations, and to falsely claim that the relevant work would be performed by them.

Defendants also falsely represented that investments would be made into UEE, in satisfaction of the requirements of the SBIR and STTR program requirements, but no such investments were actually made. Defendants' procurement of such investments was an express condition of the awards they received, and their failure to comply with that condition deprived the Government of the benefit of its bargain. *See United States v. Canova*, 412 F.3d 331, 352 (2d Cir. 2005) (“When a party fraudulently procures payment for goods or services by representing that they were produced or provided according to certain specifications, it is not the task of a sentencing court to second-guess the victim’s judgment as to the necessity of those specifications. Whether the testing time on a pacemaker, the number of rivets on an airplane wing, or the coats of paint on a refurbished building is a matter of necessity or whim, the fact remains that the victim has been induced to pay for something that it wanted and was promised but did not get, thereby incurring some measure of pecuniary ‘loss.’”). The

procurement of outside funding was meant to serve as confirmation for the Government that it was receiving research that other entities also deemed promising and worthy of investment, when in actuality those other entities were also involved in Defendants' fraud and no such outside funding had been provided.

In sum, even accepting Defendants' representations about the research performed, the Government still did not receive the benefit for which it had bargained, because UEE's research was not performed by the individuals who were supposed to perform it and was not funded by the entities who were supposed to fund it. Moreover, the Court agrees with the Government that, in light of the extensive fraud perpetrated by Defendants, their representations about the work that was actually done are of limited value. Indeed, any value of the so-called "product" provided by Defendants is questionable given the fraud that permeated the awards.

Additionally, the Government has amply demonstrated that a primary purpose for SBIR and STTR awards is to promote entrepreneurship within traditionally disadvantaged populations. No reasonable definition of entrepreneurship encompasses the kind of fraud perpetrated by Defendants in this case. Defendants' actions therefore deprived the Government of a key benefit it anticipated receiving in return for its monetary awards—the promotion of legitimate entrepreneurship among the populations eligible for SBIR and STTR funding. This is an additional reason why the full \$8,410,900 awarded to Defendants was a loss to the Government.

To the extent Defendants claim a credit against the loss amount for work performed and services rendered, they are the parties who must produce evidence sufficient to allow the

Court to ascertain the value of such credit. They have failed to do so in this case. While Defendants claim that the Government obtained valuable intellectual property and other benefits as a result of their efforts, they have failed to adduce any evidence from which the Court could reasonably estimate the monetary value of those purported benefits. *Cf. Near*, 708 F. App'x at 603 (upholding finding that fair market value of services rendered had been reasonably established by “extensive testimony by a forensic accountant for the defendants”). In particular, the Court notes that there is absolutely no evidence in the record from which the Court could reasonably conclude that the value of such services equaled or exceeded \$4,910,900, which is the amount the loss would have to be reduced in order to render the 18-level enhancement inapplicable.⁹ This is particularly true in light of the significant amount of funds transferred from UEE for Defendants’ personal benefit. Even assuming that Defendants’ efforts provided some minimal value to the Government, a reasonable estimate of the loss in this case would therefore still exceed \$3,500,000. The Court is not required to make a more precise finding. *See Canova*, 412 F.3d at 352 (“[I]n applying the Sentencing Guidelines, loss need not be determined with precision; a sentencing court need only make a reasonable estimate of the loss, given the available information.” (quotations omitted)).

The Court is not persuaded by Defendants’ contention that this case is comparable to cases in which the Government contracts for specific, identifiable goods, or for specific construction work, and that the amount of the awards is therefore a fair estimate of the value

⁹ Pursuant to U.S.S.G. § 2B1.1(b)(1)(J) and (K), an 18-level enhancement is applied if the loss amount is more than \$3,500,000 but not more than \$9,500,000. The established *prima facie* loss amount of \$8,410,900 would thus have to be reduced by at least \$4,910,900 for a lesser enhancement to apply.

of the research performed. *See, e.g., United States v. Roy*, __ F. App'x __, 2018 WL 4355956, at *3 (8th Cir. Sept. 12, 2018) (involving fair market value of construction services). Scientific research is not the same as, for example, construction of a bridge or delivery of a truck, inasmuch as its value is uncertain, difficult to quantify, and often cannot be ascertained until long after it is completed. The end “product” of scientific research is increased knowledge, which may or may not ultimately be capable of commercialization, and there is not necessarily a direct correlation between the amount the Government is willing to invest into scientific research and the monetary value it expects to receive.

Moreover, and as discussed above, the awards in this case were made on the assumption that the specified individuals would be performing the relevant research. Even accepting the argument that the amount of the awards represents the Government’s valuation of that research, there is no support for the conclusion that similar research and services performed by other individuals is of comparable value. The Government’s acceptance of reports from Defendants regarding the research that had allegedly been performed does not change this analysis—as the Government has demonstrated, those reports were permeated by fraud and cannot be relied upon as an accurate representation of the work that was performed in actuality.

Under these circumstances, and for the foregoing reasons, the Court adopts the PSRs’ and revised PSRs’ conclusion that an 18-level increase in the offense level pursuant to U.S.S.G. § 2B1.1(b)(1)(J) is warranted.

2. Sophisticated Means Enhancement

U.S.S.G. § 2B1.1(b)(10)(C) provides for a two-level increase in the offense level if

“the offense otherwise involved sophisticated means and the defendant intentionally engaged in or caused the conduct constituting sophisticated means.” Application Note 9(B) defines “sophisticated means” as follows:

[E]specially complex or especially intricate offense conduct pertaining to the execution or concealment of an offense. For example, in a telemarketing scheme, locating the main office of the scheme in one jurisdiction but locating soliciting operations in another jurisdiction ordinarily indicates sophisticated means. Conduct such as hiding assets or transactions, or both, through the use of fictitious entities, corporate shells, or offshore financial accounts also ordinarily indicates sophisticated means.

U.S.S.G. § 2B1.1 Application Note 9(B). Here, the PSRs conclude that this two-level enhancement is appropriate, stating as follows:

Wen and Zhang engaged in a conspiracy to obtain government grants by providing false information. The [defendants] used several of their other companies to promise false investments knowing that there was no ability to fund the promised investment. Furthermore, this offense involved the creation of fake email addresses and backgrounds of purported employees to bolster the proposals. As such, a 2-level increase applies.

(Wen PSR at ¶ 197; Zhang PSR at ¶ 195).

Defendants contend that the sophisticated means-enhancement does not apply in this case, which they characterize as a “garden-variety” fraudulent scheme. (Zhang Dkt. 49 at ¶ 29.B) (quotation omitted). The Government argues in opposition that Defendants’ offense involved the creation and use of shell companies and the fabrication of sham documents and, on its face, merits a two-level sophisticated means-enhancement. (Wen Dkt. 53 at ¶ 29).

The Court agrees with the Government that a two-level sophisticated means-enhancement is warranted in this case. As discussed above, the record in this case

demonstrates that Defendants: (1) used shell companies for the purpose of falsifying investments into UEE; (2) had wholly fictitious individuals and/or unaffiliated individuals sign letters on fabricated letterhead on behalf of those shell companies; (3) deceived Dr. Costello, Dr. Burlitch, and Mr. Cicora about the ways in which their credentials and names were being used; and (4) created false email addresses, phone numbers, and fax numbers to perpetuate their fraud. These actions, taken together, rise to the level of sophistication contemplated by U.S.S.G. § 2B1.1(b)(10)(C). *See United States v. Elia*, 392 F. App'x 883, 886 (2d Cir. 2010) (finding that even if individual actions were not themselves sophisticated, “the coordination of these actions clearly involves sophistication”); *United States v. Jackson*, 346 F.3d 22, 25 (2d Cir. 2003) (“[E]ven if each step in the scheme was not elaborate, the total scheme was sophisticated in the way all the steps were linked together so that [the defendant] . . . could perceive and exploit different vulnerabilities in different systems in a coordinated way.”); *United States v. Lewis*, 93 F.3d 1075, 1083 (2d Cir. 1996) (“Even if each step in the [scheme] . . . was simple, when viewed together, the steps comprised a plan more complex than merely filling out a false tax return.”).

The Court particularly finds that the misappropriation of Dr. Costello, Dr. Burlitch, and Mr. Cicora’s credentials and the fabrication of individuals and documents purportedly associated with Defendants’ shell companies takes this out of the realm of a garden-variety fraudulent scheme. *See, e.g., United States v. Stitsky*, 536 F. App'x 98, 112 (2d Cir. 2013) (district court appropriately concluded that two-level enhancement applied where scheme: “(1) lasted several years; (2) reflected very careful planning; (3) included a careful effort to conceal the fraud by lying to business partners, lawyers, and investors; (4) relied on creating

and disseminating marketing publications that contained material misrepresentations; and (5) involved the creation of fictitious documents for the purpose of convincing investors to give money” (quotations omitted)); *see also United States v. Valente*, 688 F. App’x 76, 80 (2d Cir. 2017) (“Defendant’s fabrication of sophisticated false documents relating to the status of the funds he took from his victims constituted sophisticated means.”).

The unpublished, out-of-circuit district court cases cited by Defendants (*see* Zhang Dkt. 49 at ¶ 29) do not change the Court’s conclusion. While these cases involved SBIR-related fraud, they did not rise to the level of sophistication demonstrated by Defendants in this matter.

3. Abuse of Trust/Special Skill Enhancement

U.S.S.G. § 3B1.3 provides for a two-level increase in the offense level “[i]f the defendant abused a position of public or private trust, or used a special skill, in a manner that significantly facilitated the commission or concealment of the offense.” Application Note 1 defines “public or private trust” as “a position of public or private trust characterized by professional or managerial discretion,” and notes that “[f]or this adjustment to apply, the position of public or private trust must have contributed in some significant way to facilitating the commission or concealment of the offense (*e.g.*, by making the detection of the offense or the defendant’s responsibility for the offense more difficult).” Application Note 4 defines “special skill” as “a skill not possessed by members of the general public and usually requiring substantial education, training or licensing. Examples would include pilots, lawyers, doctors, accountants, chemists, and demolition experts.”

Here, the PSRs concluded a two-level enhancement under U.S.S.G. § 3B1.3 was warranted, finding with respect to Wen:

Wen was the subject of public and private trust in that he had professional discretion as the principal [investigator] and chemist, positions he used to facilitate and conceal the offense. Specifically, Wen and Zhang submitted false representations in their applications, proposals, and financial reports regarding their personnel, budgets, and work performed and signed and dated false certifications which the agencies relied on to be true when it came to issuing grants. Were it not for their positions of trust, they would not ordinarily have been in a position to do these actions. Additionally, Wen utilized his knowledge of the process that he obtained from being a reviewer for other companies['] SBIR proposals to assist him in bolstering his own and winning awards. Without the position that Wen held and his special skills, the commission of the offense would not have been possible. As such, a 2-level increase applies.

(Wen PSR at ¶ 199). With respect to Zhang, the PSRs concluded:

Zhang was the subject of public and private trust in that she was the principal owner of [UEE], and had professional discretion which she used to facilitate and conceal the offense. Specifically, Wen and Zhang submitted false representations in their applications, proposals, and financial reports regarding their personnel, budgets, and work performed and signed and dated false certifications which the agencies relied on to be true when it came to issuing grants. Were it not for their positions of trust and special skills, the commission of the instant offense would not have been possible. As such, a 2-level increase applies.

(Zhang PSR at ¶ 197).

Defendants argue that no increase under U.S.S.G. § 3B1.3 is warranted. In particular, they contend that (1) Defendants did not abuse a position of trust because, pursuant to established Second Circuit case law, “the defendant must violate a position of trust within the victim agencies for the enhancement to apply,” and (2) Defendants did not use special skills because Wen’s understanding of the SBIR and STTR process does not constitute a special skill. (Zhang Dkt. 49 at ¶ 28.B (emphasis omitted)). The Government counters that

Defendants held a position of trust within the victim agencies, “as Principal Investigators in charge of publicly funded awards,” and that Defendants did use their special skills as scientists in order to increase the likelihood of success of their fraud. (Wen Dkt. 57 at ¶ 28).

Defendants are correct that, in the Second Circuit, “[w]hether a position is one of ‘trust’ . . . is to be viewed from the perspective of the offense victims.” *United States v. Thorn*, 317 F.3d 107, 120 (2d Cir. 2003) (alterations in original) (quoting *United States v. Wright*, 160 F.3d 905, 910 (2d Cir. 1998)). “Whether someone occupies a position of trust turns on the extent to which the position provides the freedom to commit a difficult-to-detect wrong. . . .” *Id.* (quotation omitted). It is not clear to the Court, based on the record before it, that Defendants occupied a position of trust with respect to the victim agencies. However, the Court need not resolve this issue because it finds, in any event, that Defendants used “special skills” to facilitate committing and concealing their offenses.

Wen has a bachelor’s degree in chemical engineering, a master’s degree in applied chemistry, and a doctorate in engineering. (Wen PSR at ¶ 243). Zhang has a master’s of science degree from Loyola University and has worked as an engineer. (Zhang PSR at ¶¶ 229, 231-32). The scientific and engineering skills possessed by Defendants qualify as “special skills” within the meaning of U.S.S.G. § 3B1.3. *See, e.g., United States v. Sain*, 141 F.3d 463, 476-77 (3d Cir. 1998) (defendant’s education as an engineer and experience with wastewater treatment were “special skills”); *United States v. Mizell*, 97 F.3d 1453 (6th Cir. 1996) (unpublished table decision) (defendant’s engineering training was a “special skill”); *United States v. Campbell*, 61 F.3d 976, 982 n.7 (1st Cir. 1995) (defendant’s “near Ph.D. training as a chemist was a “special skill”). Moreover, it is clear that Defendants used these skills to

facilitate their fraud. In particular, Defendants' scientific and engineering training permitted them to identify Dr. Costello, Dr. Burlitch, and Mr. Cicora as individuals who could plausibly perform the tasks fraudulently allocated to them in UEE's proposals, as well as to create plausible descriptions of the work those individuals were falsely represented as performing. These representations were key elements of Defendants' fraudulent schemes, and Defendants' special skills clearly aided them in crafting the fraudulent proposals in a manner designed to avoid detection. This is sufficient to warrant an adjustment under U.S.S.G. §3B1.3. *See United States v. Fritzson*, 979 F.2d 21, 22 (2d Cir. 1992) ("The fact that the same offenses could have been committed by a person without the defendant's special training is immaterial; a § 3B1.3 adjustment is proper where the defendant's special skills increase his chances of succeeding or of avoiding detection.").

The Court is not persuaded by Defendants' argument that the special skills enhancement does not apply because their knowledge that their representations would be material to the agencies' determinations was an element of their base fraud offense. Defendants have cited no cases holding as such, nor has the Court found any such case in its own research. Moreover, Defendants included any number of material misrepresentations in their proposals that were not informed by their special skills—for example, the misrepresentations regarding funds to be provided by third-party investors. In other words, the fact that Defendants' special skills informed them as to the best and most effective misrepresentations to use with respect to the scientific aspects of the fraudulent proposals does not render the two-level enhancement inappropriate.

4. Restitution

The PSRs conclude that the Government is entitled to restitution in the amount of \$8,410,900.00. (Wen PSR at ¶ 234; Zhang PSR at ¶ 222). Defendants object to this conclusion, for largely the same reasons they object to the PSRs' calculation of the loss amount. (Zhang Dkt. 49 at ¶ 30).

The Mandatory Victim Restitution Act, 18 U.S.C. § 3663A (the “MVRA”), makes restitution mandatory for victims of certain crimes. Section 3663A(a)(1) states that “[n]otwithstanding any other provision of law, when sentencing a defendant convicted of an offense described in subsection (c), the court shall order . . . that the defendant make restitution to the victim of the offense or, if the victim is deceased, to the victim’s estate.” As relevant here, the MVRA applies to “all sentencing proceedings for convictions of, or plea agreements relating to charges for, any offense that is . . . an offense against property . . . including any offense committed by fraud or deceit.” 18 U.S.C. § 3663A(c)(1)(A)(ii).

“Unlike loss calculations, a court’s power to order restitution is limited to actual loss.” *United States v. Thompson*, 792 F.3d 273, 277 (2d Cir. 2015) (quoting *United States v. Coriaty*, 300 F.3d 244, 252 (2d Cir. 2002)). However, “[a] restitution award need only to be a reasonable estimate of the victim’s actual losses.” *United States v. Donaghy*, 570 F. Supp. 2d 411, 423 (E.D.N.Y. 2008), *aff’d*, *United States v. Battista*, 575 F.3d 226 (2d Cir. 2009). As explained by the Second Circuit in *United States v. Gushlak*, 728 F.3d 184 (2d Cir. 2013):

[W]e have never used the word “actual” in this context to mean “mathematically precise.” Nor have we ever adopted a one-size-fits-all standard of precision for application in restitution cases. To the contrary, our case law reflects the settled understanding among courts of appeals that a “reasonable approximation” will suffice, especially in cases in which an exact

dollar amount is inherently incalculable. . . . We reiterate that the MVRA requires only a reasonable approximation of losses supported by a sound methodology. As explained by the First Circuit, “the preponderance standard must be applied in a practical, common-sense way. So long as the basis for reasonable approximation is at hand, difficulties in achieving exact measurements will not preclude a trial court from ordering restitution.”

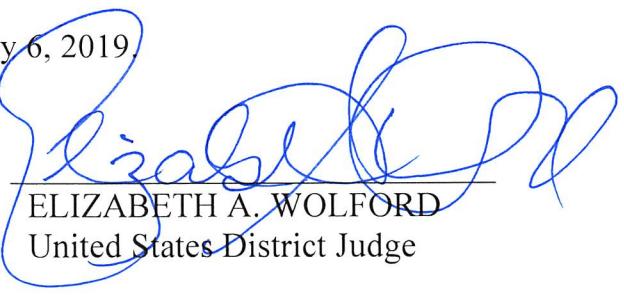
Id. at 195-96 (citations omitted).

While the Court concludes, for the reasons set forth above, that the Government has shown by a preponderance of the evidence that the loss amount in this case was more than \$3,500,000, the Court is not prepared to reach a conclusion as to the exact restitution due at this time, and reserves decision on the amount of restitution owed by Defendants until the time of sentencing. The Court notes that the parties have reached an agreement in this matter as to forfeiture, and they are certainly free to explore whether a similar agreement can be reached regarding restitution. If not, they may make any further submissions concerning restitution by the deadline for other sentencing statements (i.e. January 23, 2019).

CONCLUSION

The Court resolves Defendants’ objections to the PSRs as described above. To the extent the Court has not ruled on any objection, the subject matter of such objection will not be considered by the Court at the time of sentencing. The Court reserves decision on the amount of restitution owed by Defendants until the time of sentencing. Sentencing in these matters will go forward as scheduled on February 6, 2019.

SO ORDERED.



ELIZABETH A. WOLFORD
United States District Judge

Dated: December 21, 2018
Rochester, New York